Refine Search

Search Results -

Terms	Documents
5122467.pn.	1

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L21

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Thursday, October 07, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L21	5122467.pn.	1	L21
L20	5650554.pn.	1	L20
L19	5714474.pn.	1	L19
L18	5614474.pn.	1	L18
L17	5543576.pn.	1	L17
L16	6753459.pn.	1	L16
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L15	seed and l10	3	L15
L14	see and l10	2	L14
L13	seed and L12	2	L13
L12	rennin	238	L12
L11	rennin L10	340	L11
L10	chymosin	143	L10
L9	l1	0	L9

DB=USPT; PLUR=YES; OP=OR

L8	aqueous and L7	27	L8
L7	fraction and l6	31	L7
L6	purify and l4	42	L6
L5	purify and l1	165	L5
L4	seed and l1	110	L4
L3	l1 and L2	83	L3
L2	rennin	521	L2
L1	chymosin	556	L1

END OF SEARCH HISTORY

09/643,755

Refine Search

Search Results -

Terms	Documents
see and L10	2

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: seed and l10

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Thursday, October 07, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L14	see and l10	2	L14
L13	seed and L12	2	L13
L12	rennin	238	L12
L11	rennin L10	340	L11
L10	chymosin	143	L10
L9	l1	0	L9
DB=USPT; PLUR=YES; OP=OR			
L8	aqueous and L7	27	L8
L7	fraction and l6	31	L7
L6	purify and l4	42	L6
L5	purify and l1	165	L5
L4	seed and l1	110	L4
L3	l1 and L2	83	L3
L2	rennin	521	L2

L1	chymosin	556	L1

END OF SEARCH HISTORY

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 21 through 27 of 27 returned.

☐ 21. Document ID: US 5891650 A

L8: Entry 21 of 27 File: USPT Apr 6, 1999

US-PAT-NO: 5891650
DOCUMENT-IDENTIFIER: US 5891650 A
** See image for Certificate of Correction **

TITLE: Kinase receptor activation assay

DATE-ISSUED: April 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Godowski; Paul J.	Burlingame	CA		
Mark; Melanie R.	Burlingame	CA		
Sadick; Michael D.	El Cerrito	CA		
Shelton; David L.	Pacifica	CA		
Wong; Wai Lee Tan	Los Altos Hills	CA		

US-CL-CURRENT: 435/7.21; 435/15, 435/7.4, 435/7.94, 436/501, 436/518, 436/531, 436/548, 530/388.22, 530/388.26, 530/389.6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw D

☐ 22. Document ID: US 5889189 A

L8: Entry 22 of 27 File: USPT Mar 30, 1999

US-PAT-NO: 5889189
DOCUMENT-IDENTIFIER: US 5889189 A

TITLE: Process for protein production in plants

DATE-ISSUED: March 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rodriguez; Raymond L.	Davis	CA		

US-CL-CURRENT: 800/320; 435/320.1, 435/69.1, 435/69.8, 536/23.5, 536/23.6, 536/24.1, 800/288, 800/320.1, 800/320.2, 800/320.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

☐ 23. Document ID: US 5888789 A

L8: Entry 23 of 27 File: USPT Mar 30, 1999

US-PAT-NO: 5888789
DOCUMENT-IDENTIFIER: US 5888789 A

TITLE: Process for protein production in plants

DATE-ISSUED: March 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rodriguez; Raymond L.	Davis	CA		

US-CL-CURRENT: 435/69.1; 435/320.1, 435/419, 435/420, 435/431, 435/468, 435/69.8, 435/70.1, 530/412, 536/23.6, 536/24.1, 800/278, 800/288

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

☐ 24. Document ID: US 5766863 A

L8: Entry 24 of 27 File: USPT Jun 16, 1998

US-PAT-NO: 5766863
DOCUMENT-IDENTIFIER: US 5766863 A

TITLE: Kinase receptor activation assay

DATE-ISSUED: June 16, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Godowski; Paul J.	Burlingame	CA		
Mark; Melanie R.	Burlingame	CA		
Sadick; Michael D.	El Cerrito	CA		
Shelton; David L.	Pacifica	CA		
Wong; Wai Lee Tan	Los Altos Hills	CA		

US-CL-CURRENT: 435/7.21; 435/6, 435/69.1, 435/7.4, 435/7.94, 435/975, 436/501, 436/518, 436/531, 436/548, 530/388.22, 530/388.26, 530/389.6, 530/391.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

☐ 25. Document ID: US 5709858 A

L8: Entry 25 of 27 File: USPT Jan 20, 1998

US-PAT-NO: 5709858
DOCUMENT-IDENTIFIER: US 5709858 A

TITLE: Antibodies specific for Rse receptor protein tyrosine kinase

DATE-ISSUED: January 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Godowski; Paul J.	Burlingame	CA		
Mark; Melanie R.	Burlingame	CA		
Scadden; David T.	Weston	MA		

US-CL-CURRENT: 424/143.1; 424/139.1, 435/7.4, 530/387.3, 530/387.9, 530/388.22, 530/391.1, 530/391.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. D

☐ 26. Document ID: US 5650554 A

L8: Entry 26 of 27 File: USPT Jul 22, 1997

US-PAT-NO: 5650554
DOCUMENT-IDENTIFIER: US 5650554 A

TITLE: Oil-body proteins as carriers of high-value peptides in plants

DATE-ISSUED: July 22, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Moloney; Maurice	Calgary			CA

US-CL-CURRENT: 800/288; 435/183, 435/320.1, 435/418, 435/419, 435/69.1, 435/69.2, 435/69.52, 435/69.6, 435/69.7, 435/69.8, 435/70.1, 435/71.1, 536/23.2, 536/23.4, 536/23.52, 536/23.6, 536/24.1, 800/298, 800/301, 800/302

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. D

☐ 27. Document ID: US 4370267 A

L8: Entry 27 of 27 File: USPT Jan 25, 1983

US-PAT-NO: 4370267
DOCUMENT-IDENTIFIER: US 4370267 A

TITLE: Fractionation and isolation of 7S and 11S protein from isoelectrically precipitated vegetable protein mixtures

DATE-ISSUED: January 25, 1983

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lehnhardt; William F.	Decatur	IL		
Gibson; Paul W.	Mt. Zion	IL		
Orthoefer; Frank T.	Decatur	IL		

US-CL-CURRENT: 530/378; 426/52, 426/63, 426/634, 426/656, 435/18, 435/23, 435/24, 435/272, 530/370, 530/375, 530/376, 530/377

Terms	Documents
aqueous and L7	27

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: WO 9015865 A, JP 2974763 B2, AU 9058522 A, FI 9105812 A, EP 477277 A, NO 9104886 A, US 5122467 A, JP 05500301 W, US 5215908 A, EP 477277 B1, EP 477277 A4, DE 69018823 E, FI 100110 B1, CA 2058453 C

Using default format because multiple data bases are involved.

L14: Entry 1 of 2 File: DWPI Dec 27, 1990

DERWENT-ACC-NO: 1991-022230
DERWENT-WEEK: 199953
COPYRIGHT 2004 DERWENT INFORMATION LTD
TITLE: Purificn. of chymosin enzyme - by chromatography on phenyl sepharose resin

INVENTOR: HEINSOHN, H G; MURPHY, M B

PRIORITY-DATA: 1989US-0365944 (June 13, 1989), 1992US-0869838 (April 16, 1992)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9015865 A	December 27, 1990		020	
JP 2974763 B2	November 10, 1999		006	C12N009/64
AU 9058522 A	January 8, 1991		000	
FI 9105812 A	December 10, 1991		000	
EP 477277 A	April 1, 1992		000	
NO 9104886 A	December 12, 1991		000	
US 5122467 A	June 16, 1992		006	C12N009/64
JP 05500301 W	January 28, 1993		005	C12N009/64
US 5215908 A	June 1, 1993		006	C12N009/64
EP 477277 B1	April 19, 1995	E	008	C12N009/64
EP 477277 A4	May 13, 1992		000	
DE 69018823 E	May 24, 1995		000	C12N009/64
FI 100110 B1	September 30, 1997		000	C12N009/64
CA 2058453 C	June 1, 1999	E	000	C12N009/64

INT-CL (IPC): C12 N 9/00; C12 N 9/64

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw De

☐ 2. Document ID: WO 8403711 A, CA 1212053 A, DE 3479743 G, DE 3486319 G, EP 122080 A, EP 122080 B, EP 268743 A, EP 268743 B1, GB 2138004 A, GB 2138004 B, JP 60500893 W, JP 94102034 B2, US 5340926 A

L14: Entry 2 of 2 File: DWPI Sep 27, 1984

DERWENT-ACC-NO: 1984-256610
DERWENT-WEEK: 198441

TITLE: Soluble native protein prodn. - by reversible denaturing of insoluble protein in alkaline soln.

INVENTOR: ANGAL, S; MARSTON, F A O ; SCHOEMAKER, J A ; LOWE, P A

PRIORITY-DATA: 1983GB-0027345 (October 12, 1983), 1983GB-0008234 (March 25, 1983), 1983WO-GB00152 (June 7, 1983)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 8403711 A	September 27, 1984	E	019	
CA 1212053 A	September 30, 1986		000	
DE 3479743 G	October 19, 1989		000	
DE 3486319 G	July 21, 1994		000	C12N015/00
EP 122080 A	October 17, 1984	E	000	
EP 122080 B	September 13, 1989	E	000	
EP 268743 A	June 1, 1988	E	000	
EP 268743 B1	June 15, 1994	E	006	C12N015/00
GB 2138004 A	October 17, 1984		006	
GB 2138004 B	May 13, 1987		000	
JP 60500893 W	June 20, 1985		000	
JP 94102034 B2	December 14, 1994		005	C12P021/02
US 5340926 A	August 23, 1994		005	C07K003/12

INT-CL (IPC): A61K 39/39; A61K 39/395; C07G 7/00; C07K 3/12; C07K 15/06; C12N 1/20; C12N 9/52; C12N 15/00; C12N 15/13; C12P 21/00; C12P 21/02; G01N 33/56; C12P 21/02; C12R 1/19

Terms	Documents
see and L10	2

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NEWS	7	AUG 27	BIOCOMMERCE: Changes and enhancements to content coverage
NEWS	8	AUG 27	BIOTECHABS/BIOTECHDS: Two new display fields added for legal status data from INPADOC
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NEWS	12	SEP 14	STN Patent Forum to be held October 13, 2004, in Iselin, NJ
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NEWS	14	SEP 27	SWETSCAN will no longer be available on STN

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=> s chymosin
L1         3982 CHYMOSIN

=> s seed and l1
L2           35 SEED AND L1

=> s rennin
L3         2963 RENNIN

=> s seed and l3
L4           11 SEED AND L3

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5           10 DUP REM L4 (1 DUPLICATE REMOVED)

=> d 1-10

L5   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2000:441611  CAPLUS
DN   133:69803
TI   Transgenic plants and methods for production thereof
IN   Keller, W. A.; Fabijanski, S. F.; Arnison, P. G.
PA   National Research Council of Canada, Can.
SO   PCT Int. Appl., 63 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   WO 2000037060        A2    20000629    WO 1999-CA1223          19991222
     WO 2000037060        A3    20010104
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     EP 1140043           A2    20011010    EP 1999-962007          19991222
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     JP 2002532114        T2    20021002    JP 2000-589171          19991222
     AU 776046            B2    20040826    AU 2000-18516           19991222
```

	US 2003188329	A1	20031002	US 2001-886207	20010622
	US 6753459	B2	20040622		
PRAI	US 1998-113546P	P	19981222		
	WO 1999-CA1223	W	19991222		

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:287451 CAPLUS
DN 135:60230
TI Production of **rennin**-like enzyme by Hyphomucor assamensis using solid cultures
AU Ghanem, Nevine B.; El-Aassar, Samy A.; Abedin, Rania M.
CS Department of Botany and Microbiology, Faculty of Science, Alexandria University, Alex, Egypt
SO Egyptian Journal of Microbiology (2000), Volume Date 1999, 34(3), 447-463
CODEN: EJMBA2; ISSN: 0301-8172
PB National Information and Documentation Centre
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:510484 CAPLUS
DN 117:110484
TI Microencapsulation of food additives in denatured protein
IN Janda, Joseph; Bernacchi, Donald; Frieders, Suzanne
PA Griffith Laboratories Worldwide, Inc., USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9205708	A1	19920416	WO 1991-US7278	19911004
	W: CA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	US 5418010	A	19950523	US 1990-593678	19901005
	CA 2075204	AA	19911004	CA 1991-2075204	19911004
	EP 504387	A1	19920923	EP 1991-919717	19911004
	EP 504387	B1	19950705		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
PRAI	US 1990-593678	A2	19901005		
	WO 1991-US7278	W	19911004		

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:588975 CAPLUS
DN 109:188975
TI Acute oral toxicities of natural food additives
AU Noda, Tsutomu; Morita, Shigeru; Ohgaki, Sumiko; Shimizu, Mitsuru; Yamano, Tetsuo; Yamada, Akio
CS Dep. Hyg. Chem., Osaka City Inst. Public Health Environ. Sci., Osaka, 543, Japan
SO Seikatsu Eisei (1988), 32(3), 110-15
CODEN: SEEIAY; ISSN: 0582-4176
DT Journal
LA Japanese

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 1981:492930 CAPLUS
DN 95:92930
TI Trypsin inhibitor activity in Vicia faba beans

AU El-Mahdy, A. Rafik; Moustafa, E. K.; Mohamed, M. S.
CS Fac. Agric., Univ. Alexandria, Alexandria, Egypt
SO Food Chemistry (1981), 7(1), 63-71
CODEN: FOCHDJ; ISSN: 0308-8146
DT Journal
LA English

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1964:19209 CAPLUS
DN 60:19209
OREF 60:3419e-f
TI Quality standardization, chemical analysis, and biological evaluation of fermented milk products prepared by different methods
AU Qureshi, Rahmat U.; Habibullah; Ali, S. M.
CS Pakistan Council Sci. Ind. Res., Lahore
SO Pakistan Journal of Scientific Research (1963), 15(1), 25-31
CODEN: PJSRAV; ISSN: 0552-9050
DT Journal
LA Unavailable

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1936:8106 CAPLUS
DN 30:8106
OREF 30:1076b-d
TI Protease action on protein of ungerminated cereal grains and its effect on the amylolytic power
AU Chrzaszez, Tadeusz; Janicki, Josef
SO Biochemische Zeitschrift (1935), 281, 408-19
CODEN: BIZEA2; ISSN: 0366-0753
DT Journal
LA Unavailable

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1925:17129 CAPLUS
DN 19:17129
OREF 19:2226c-e
TI The coagulating property of papain
AU Rosenfeld, L.
SO Biochemische Zeitschrift (1924), 149, 158-73
CODEN: BIZEA2; ISSN: 0366-0753
DT Journal
LA Unavailable

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1914:20861 CAPLUS
DN 8:20861
OREF 8:3059f-h
TI Action of coagulating enzymes on caseinogen
AU Harden, A.; Macallum, A. B.
CS London
SO Biochemical Journal (1914), 8, 90-9
CODEN: BIJOAK; ISSN: 0264-6021
DT Journal
LA Unavailable

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1913:4287 CAPLUS
DN 7:4287
OREF 7:627i,628a
TI Alfalfa Investigation. IV. Enzymes Present in Alfalfa **Seeds**.
AU Jacobson, C. A.
CS Nevada Agr. Expt. Sta.

SO Journal of the American Chemical Society (1913), 34, 1730-40
    CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable

=> d his

    (FILE 'HOME' ENTERED AT 17:57:54 ON 07 OCT 2004)

    FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 17:58:13 ON 07 OCT 2004
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L2   35 S SEED AND L1
L3   2963 S RENNIN
L4   11 S SEED AND L3
L5   10 DUP REM L4 (1 DUPLICATE REMOVED)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L6   22 DUP REM L2 (13 DUPLICATES REMOVED)

=> d 1-22

L6 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:512142 CAPLUS
DN 139:80190
TI Production of recombinant heterologous proteins by incorporation into
    plant oil bodies for efficient expression and purification
IN Moloney, Maurice M.; Van Rooijen, Gijs
PA Sembiosys Genetics Inc., Can.
SO U.S. Pat. Appl. Publ., 52 pp., Cont.-in-part of U.S. Ser. No. 210,843.
    CODEN: USXXCO
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003126631	A1	20030703	US 2001-893525	20010629
	US 6753167	B2	20040622		
	US 5650554	A	19970722	US 1994-366783	19941230
	US 5948682	A	19990907	US 1997-846021	19970425
	US 6288304	B1	20010911	US 1998-210843	19981218
	US 2003177537	A1	20030918	US 2002-324131	20021220
PRAI	US 1991-659835	B2	19910222		
	US 1993-142418	B2	19931116		
	US 1994-366783	A2	19941230		
	US 1997-846021	A2	19970425		
	US 1998-210843	A2	19981218		
	US 2001-893525	A2	20010629		

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
            ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:261069 CAPLUS
DN 138:282341
TI Vector and transgenic Dunaliella salina as a bioreactor for producing
    drugs, vaccines and phytohormones
IN Xue, Lexun; Pan, Weidong; Jiang, Guozhong; Wang, Jianmin
PA Peop. Rep. China
SO U.S. Pat. Appl. Publ., 12 pp.
    CODEN: USXXCO
DT Patent

LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003066107	A1	20030403	US 2001-997445	20011129
	CN 1356388	A	20020703	CN 2000-131217	20001203
	CN 1410525	A	20030416	CN 2001-128486	20010921
PRAI	CN 2000-131217	A	20001203		
	CN 2001-128486	A	20010921		

L6 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2003:904123 CAPLUS
DN 141:35858
TI Precise and efficient cleavage of recombinant fusion proteins using mammalian aspartic proteases
AU Kuehnel, Blanka; Alcantara, Joenel; Boothe, Joseph; van Rooijen, Gijs; Moloney, Maurice
CS SemBioSys Genetics Inc., Calgary, AB, T1Y 7L3, Can.
SO Protein Engineering (2003), 16(10), 777-783
CODEN: PRENE9; ISSN: 0269-2139
PB Oxford University Press
DT Journal
LA English
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:505462 CAPLUS
DN 137:74423
TI Chimeric genes encoding thioredoxin, thioredoxin reductase or other proteins and oleosins for oil body targeting in transgenic plants
IN Moloney, Maurice M.; Dalmia, Bipin K.
PA Sembiosys Genetics, Inc., Can.
SO U.S. Pat. Appl. Publ., 69 pp., Cont.-in-part of U. S. 6,288,304.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002088025	A1	20020704	US 2001-897425	20010703
	US 6750046	B2	20040615		
	US 5650554	A	19970722	US 1994-366783	19941230
	US 5948682	A	19990907	US 1997-846021	19970425
	US 6288304	B1	20010911	US 1998-210843	19981218
PRAI	US 1991-659835	B2	19910222		
	US 1993-142418	B2	19931116		
	US 1994-366783	A2	19941230		
	US 1997-846021	A2	19970425		
	US 1998-210843	A2	19981218		

RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:591669 CAPLUS
DN 137:154384
TI Symbiotic regenerative compositions containing microorganisms
IN Schuer, Joerg-Peter
PA Germany
SO Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DT Patent

LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1228769	A1	20020807	EP 2001-102384	20010202
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	WO 2002067986	A2	20020906	WO 2002-EP1056	20020201
	WO 2002067986	A3	20031211		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1390071	A2	20040225	EP 2002-712882	20020201
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004076614	A1	20040422	US 2003-467040	20031204
PRAI	EP 2001-102384	A	20010202		
	WO 2002-EP1056	W	20020201		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:152856 CAPLUS
DN 134:204356
TI Commercial production of **chymosin** in plant by recombinant expression in **seeds**
IN Van Rooijen, Gijs; Keon, Richard Glenn; Boothe, Joseph; Shen, Yin
PA Sembiosys Genetics Inc., Can.
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001014571	A1	20010301	WO 2000-CA975	20000823
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1216306	A1	20020626	EP 2000-954228	20000823
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI	US 1999-378696	A	19990823		
	WO 2000-CA975	W	20000823		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:571776 CAPLUS

DN 131:180808
TI Targetting foreign proteins manufactured in plant cells to oil bodies using targetting sequences from oleosins
IN Moloney, Maurice M.
PA Sembiosys Genetics Inc., Can.
SO U.S., 48 pp., Cont.-in-part of U.S. 5,650,554.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5948682	A	19990907	US 1997-846021	19970425
	US 5650554	A	19970722	US 1994-366783	19941230
	US 6288304	B1	20010911	US 1998-210843	19981218
	US 2002100073	A1	20020725	US 2001-887569	20010625
	US 2003126631	A1	20030703	US 2001-893525	20010629
	US 6753167	B2	20040622		
	US 2002088025	A1	20020704	US 2001-897425	20010703
	US 6750046	B2	20040615		
	US 2003177537	A1	20030918	US 2002-324131	20021220
PRAI	US 1991-659835	B2	19910222		
	US 1993-142418	B2	19931116		
	US 1994-366783	A2	19941230		
	US 1997-846021	A2	19970425		
	US 1998-210843	A3	19981218		
	US 2001-893525	A2	20010629		

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:527665 CAPLUS
DN 127:186616
TI Recombinant preparation of high-value peptides by using oil-body proteins as carriers in transgenic plants
IN Moloney, Maurice
PA Sembiosys Genetics Inc., Can.
SO U.S., 37 pp., Cont.-in-part of U.S. Ser. No. 142,418, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5650554	A	19970722	US 1994-366783	19941230
	CA 2208751	AA	19960711	CA 1995-2208751	19951221
	WO 9621029	A1	19960711	WO 1995-CA724	19951221
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9642950	A1	19960724	AU 1996-42950	19951221
	AU 709141	B2	19990819		
	ZA 9510999	A	19960713	ZA 1995-10999	19951228
	BR 9600006	A	19980121	BR 1996-6	19960102
	US 5948682	A	19990907	US 1997-846021	19970425
	US 6288304	B1	20010911	US 1998-210843	19981218
	US 2002100073	A1	20020725	US 2001-887569	20010625
	US 2003126631	A1	20030703	US 2001-893525	20010629

	US 6753167	B2	20040622		
	US 2002088025	A1	20020704	US 2001-897425	20010703
	US 6750046	B2	20040615		
	US 2003177537	A1	20030918	US 2002-324131	20021220
PRAI	US 1991-659835	B2	19910222		
	US 1993-142418	B2	19931116		
	US 1994-366783	A	19941230		
	WO 1995-CA724	W	19951221		
	US 1997-846021	A2	19970425		
	US 1998-210843	A3	19981218		
	US 2001-893525	A2	20010629		

L6 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1997:204928 CAPLUS
DN 126:198695
TI Oryzasin As an Aspartic Proteinase Occurring in Rice **Seeds**: Purification, Characterization, and Application to Milk Clotting
AU Asakura, Tomiko; Watanabe, Hirohito; Abe, Keiko; Arai, Soichi
CS Laboratory of Food Science, Atomi Junior College, Tokyo, 112, Japan
SO Journal of Agricultural and Food Chemistry (1997), 45(4), 1070-1075
CODEN: JAFCAU; ISSN: 0021-8561
PB American Chemical Society
DT Journal
LA English

L6 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:537696 CAPLUS
DN 125:187589
TI Plant oleosin cDNA sequences and oil body proteins as carriers of high value recombinant proteins
IN Moloney, Maurice
PA University Technologies International, Inc., Can.
SO PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9621029	A1	19960711	WO 1995-CA724	19951221
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5650554	A	19970722	US 1994-366783	19941230
	AU 9642950	A1	19960724	AU 1996-42950	19951221
	AU 709141	B2	19990819		
PRAI	US 1994-366783	A	19941230		
	US 1991-659835	B2	19910222		
	US 1993-142418	B2	19931116		
	WO 1995-CA724	W	19951221		

L6 ANSWER 11 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
AN 97:43159 AGRICOLA
DN IND20572726
TI Milk-clotting enzyme from Solanum dobium plant.

AU Yousif, B.H.; McMahon, D.J.; Shammet, K.M.
CS Utah State University, Logan, UT.
AV DNAL (SF221.I57)
SO International dairy journal, June 1996. Vol. 6, No. 6. p. 637-644
Publisher: Oxford, U.K. : Elsevier Science Limited.
CODEN: IDAJE6; ISSN: 0958-6946
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L6 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1995:786724 CAPLUS
DN 124:77836
TI Rice aspartic proteinase, oryzasin, expressed during **seed** ripening and germination, has a gene organization distinct from those of animal and microbial aspartic proteinases
AU Asakura, Tomiko; Watanabe, Hirohito; Abe, Keiko; Arai, Soichi
CS Laboratory Food Science, Atomi Junior College, Tokyo, Japan
SO European Journal of Biochemistry (1995), 232(1), 77-83
CODEN: EJBCAI; ISSN: 0014-2956
PB Springer
DT Journal
LA English

L6 ANSWER 13 OF 22 CABA COPYRIGHT 2004 CABI on STN
AN 94:73201 CABA
DN 19940403218
TI Identification and partial purification of a novel milk clotting enzyme from Onopordum turcicum
AU Tamer, I. M.
CS Food Engineering Department, Hacettepe University, Beytepe, 06532 Ankara, Turkey.
SO Biotechnology Letters, (1993) Vol. 15, No. 4, pp. 427-432. 24 ref.
ISSN: 0141-5492
DT Journal
LA English
ED Entered STN: 19941101
Last Updated on STN: 19941101

L6 ANSWER 14 OF 22 CABA COPYRIGHT 2004 CABI on STN
AN 95:137433 CABA
DN 19950311620
TI Aspartic proteinase inhibitor from wheat: some properties
AU Galleschi, L.; Friggeri, M.; Repiccioli, R.; Come, D. [EDITOR]; Corbineau, F. [EDITOR]
CS Department of Botanical Sciences, University of Pisa, 56123 Pisa, Italy.
SO Proceedings of the Fourth International Workshop on Seeds: basic and applied aspects of seed biology, Angers, France, 20-24 July, 1992. Volume 1, (1993) pp. 207-211. 12 ref.
Publisher: ASFIS. Paris
Meeting Info.: Proceedings of the Fourth International Workshop on Seeds: basic and applied aspects of seed biology, Angers, France, 20-24 July, 1992. Volume 1.
ISBN: 2-9507351-2-6
CY France
DT Conference Article
LA English
ED Entered STN: 19950821
Last Updated on STN: 19950821

L6 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AN 1993:513438 CAPLUS
DN 119:113438
TI cDNA cloning of an extracellular dermal glycoprotein of carrot and its expression in response to wounding
AU Satoh, Shinobu; Sturm, Arnd; Fujii, Tadashi; Chrispeels, Maarten J.
CS Inst. Biol. Sci., Univ. Tsukuba, Tsukuba, 305, Japan
SO Planta (1992), 188(3), 432-8
CODEN: PLANAB; ISSN: 0032-0935
DT Journal
LA English

L6 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:52978 CAPLUS
DN 116:52978
TI Transgenic **seed** for use as a source of heterologous enzymes
IN Pen, Jan; Hoekema, Andreas; Sijmons, Peter Christiaan; Van Ooyen, Albert J. J.; Rietveld, Krijn; Verwoerd, Teunis Cornelis; Quax, Wilhelmus Johannes
PA Gist-Brocades N. V., Neth.; Mogen International N. V.
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 449376	A2	19911002	EP 1991-200688	19910325
	EP 449376	A3	19911106		
	EP 449376	B1	20010516		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IL 97645	A1	19970318	IL 1991-97645	19910322
	WO 9114772	A1	19911003	WO 1991-NL48	19910325
	W: AU, CA, FI, HU, JP, KR, SU				
	AU 9177656	A1	19911021	AU 1991-77656	19910325
	AU 649447	B2	19940526		
	AU 9177766	A1	19911021	AU 1991-77766	19910325
	AU 632941	B2	19930114		
	HU 60767	A2	19921028	HU 1987-40	19910325
	JP 06501838	T2	19940303	JP 1991-508275	19910325
	JP 3471795	B2	20031202		
	JP 06502296	T2	19940317	JP 1991-508276	19910325
	HU 215260	B	19981130	HU 1991-4087	19910325
	RU 2128228	C1	19990327	RU 1991-5010599	19910325
	RU 2129609	C1	19990427	RU 1991-5010480	19910325
	ES 2160095	T3	20011101	ES 1991-200688	19910325
	US 5543576	A	19960806	US 1993-146422	19931102
	US 5714474	A	19980203	US 1996-626554	19960402
	US 2004088750	A1	20040506	US 1998-149310	19980202
	GR 3036358	T3	20011130	GR 2001-401209	20010809
PRAI	US 1990-498561	A	19900323		
	US 1990-586765	A	19900921		
	EP 1991-200688	A	19910325		
	WO 1991-NL47	A	19910325		
	WO 1991-NL48	A	19910325		
	US 1991-756994	B2	19910911		
	US 1993-146422	A3	19931102		
	US 1996-626554	A2	19960402		

L6 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
AN 1991:626750 CAPLUS
DN 115:226750

TI Purification and some properties of a milk clotting protease from the young **seeds** of Albizia julibrissin
AU Otani, Hajime; Matsumori, Manao; Hosono, Akiyoshi
CS Fac. Agric., Shinshu Univ., Minamiminowa, 399-45, Japan
SO Animal Science and Technology (1991), 62(5), 424-32
CODEN: ALSTEQ; ISSN: 0918-2365
DT Journal
LA English

L6 ANSWER 18 OF 22 CABA COPYRIGHT 2004 CABI on STN DUPLICATE 6
AN 92:1752 CABA
DN 19920450054
TI The screening of trees having milk clotting activity
AU Otani, H.; Iwagaki, M.; Hosono, A.
CS Faculty of Agriculture, Shinshu University, Minamiminowa-mura, Nagano-ken 399-45, Japan.
SO Animal Science and Technology, (1991) Vol. 62, No. 5, pp. 417-423. 10 ref.
ISSN: 0021-5309
DT Journal
LA English
SL Japanese
ED Entered STN: 19941101
Last Updated on STN: 19941101

L6 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:444091 CAPLUS
DN 119:44091
TI Aspartic proteinase from barley **seeds** is related to animal cathepsin D
AU Tormakangas, K.; Runeberg-Roos, P.; Ostman, A.; Tilgmann, C.; Sarkkinen, P.; Kervinen, J.; Mikola, L.; Kalkkinen, N.
CS Inst. Biotechnol., Univ. Helsinki, Helsinki, SF-00380, Finland
SO Advances in Experimental Medicine and Biology (1991), 306(Struct. Funct. Aspartic Proteinases), 355-9
CODEN: AEMBAP; ISSN: 0065-2598
DT Journal
LA English

L6 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:435891 CAPLUS
DN 113:35891
TI Process for controlling plant pests using recombinant proteinase inhibitor genes
IN Fowler, Elizabeth
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 74 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 348348	A2	19891227	EP 1989-810447	19890613
	EP 348348	A3	19900404		
	EP 348348	B1	20000809		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 195218	E	20000815	AT 1989-810447	19890613
	ES 2150410	T3	20001201	ES 1989-810447	19890613
	IL 90640	A1	19980104	IL 1989-90640	19890616
	AU 8936568	A1	19891221	AU 1989-36568	19890619
	AU 631551	B2	19921203		
	DK 8903022	A	19900228	DK 1989-3022	19890619

	ZA 8904638	A	19900228	ZA 1989-4638	19890619
	JP 02046238	A2	19900215	JP 1989-158114	19890620
	JP 3111204	B2	20001120		
	HU 53938	A2	19901228	HU 1989-3150	19890620
	HU 217573	B	20000228		
	GR 3034752	T3	20010228	GR 2000-402442	20001102
PRAI	US 1988-208331	A	19880620		
	US 1989-320195	A	19890307		

L6 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1940:41310 CAPLUS
DN 34:41310
OREF 34:6310h-i
TI Producing dry active products containing papain and other enzymes
PA W. Klotz & Co.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 843069		19390626	FR	

L6 ANSWER 22 OF 22 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 1993:453082 BIOSIS
DN PREV199396097982
TI Response of New Zealand honey bee colonies to Nosema apis.
AU Malone, L. A.; Giacon, H. A.; Hunapo, R. J; McIvor, C. A.
CS Hortic. and Food Res. Inst. New Zealand Ltd., Mt Albert Res. Centre, Private Bag 92169, Auckland, New Zealand
SO Journal of Apicultural Research, Vol. 31, No. 3-4, pp. 135-140. 1992 (1993).
CODEN: JACRAQ. ISSN: 0021-8839.
DT Article
LA English
ED Entered STN: 5 Oct 1993
Last Updated on STN: 6 Oct 1993

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(FILE 'HOME' ENTERED AT 17:57:54 ON 07 OCT 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 17:58:13 ON 07 OCT 2004
L1 3982 S CHYMOSIN
L2 35 S SEED AND L1
L3 2963 S RENNIN
L4 11 S SEED AND L3
L5 10 DUP REM L4 (1 DUPLICATE REMOVED)
L6 22 DUP REM L2 (13 DUPLICATES REMOVED)

HOME' ENTERED AT 17:57:54 ON 07 OCT 2004)

FILE 'CAPLUS, CABA, AGRICOLA, BIOSIS' ENTERED AT 17:58:13 ON 07 OCT 2004
L1 3982 S CHYMOSIN
L2 35 S SEED AND L1
L3 2963 S RENNIN
L4 11 S SEED AND L3
L5 10 DUP REM L4 (1 DUPLICATE REMOVED)
L6 22 DUP REM L2 (13 DUPLICATES REMOVED)

=> d l6 1-22 abs

L6 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The present invention relates to the use of an oil body protein gene to target the expression of a heterologous polypeptide, to an oil body in a host cell, wherein the protein of interest can be easily separated from other host cell components. The invention is further exemplified by methods for exploitation of the unique characteristics of the oil body proteins and oil body genes for expression of polypeptides of interest in many organisms, particularly plant **seeds**. Said polypeptides may include but are not limited to: **seed** storage proteins, enzymes, bioactive peptides, antibodies and the like. The invention can also be modified to recover recombinant polypeptides fused to oil body proteins from non-plant host cells. Addnl. the invention provides a method of using recombinant proteins associated with **seed** oil bodies released during **seed** germination for expression of polypeptides that afford protection to seedlings from pathogens. Finally, the persistent association of oil body proteins with the oil body can be further utilized to develop a biol. means to create novel immobilized enzymes useful for bioconversion of substrates. The unique features of both the oil body protein and the expression patterns are used in this invention to provide a means of synthesizing com. important proteins on a scale that is difficult if not impossible to achieve using conventional systems of protein production

L6 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The invention relates to vectors comprising a foreign target gene, special selectable markers and host cell of Dunaliella Salina for recombinantly producing drugs, vaccines and phytohormones. It is prepared by the genetic transformation techniques that include introducing a foreign target gene into the cells of Dunaliella Salina and screening the transformed cells of Dunaliella Salina. The bioreactor of the present invention can be used as a safe and cheap production system for proteins of pharmaceutical interest including vaccines, especially oral products, in a large scale, because the cells of Dunaliella Salina are easy of genetic manipulation in preparation of the bioreactor, nontoxic and harmless to the environment.

L6 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AB Expression of recombinant proteins as translational fusions is commonly employed to enhance stability, increase solubility and facilitate purification of the desired protein. In general, such fusion proteins must be cleaved to release the mature protein in its native form. The usefulness of the procedure depends on the efficiency and precision of cleavage and its cost per unit activity. We report here the development of a general procedure for precise and highly efficient cleavage of recombinant fusion proteins using the protease **chymosin**. DNA encoding a modified pro-peptide from bovine **chymosin** was fused upstream of hirudin, carp growth hormone, thioredoxin and cystatin coding sequences and expressed in a bacterial Escherichia coli host. Each of the resulting fusion proteins was efficiently cleaved at the junction between the pro-peptide and the desired protein by the addition of **chymosin**, as

determined by activity, N-terminal sequencing and mass spectrometry of the recovered protein. The system was tested further by cleavage of two fusion proteins, cystatin and thioredoxin, sequestered on oil body particles obtained from transgenic Arabidopsis **seeds**. Even when the fusion protein was sequestered and immobilized on oil bodies, precise and efficient cleavage was obtained. The precision, efficiency and low cost of this procedure suggest that it could be used in larger scale manufacturing of recombinant proteins which benefit from expression as fusions in their host organism.

L6 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The present invention relates to the use of a class of genes called oil body protein genes that have unique features. The discovery of these features allowed the invention of methods for the production of recombinant proteins wherein a protein of interest can be easily separated from other host cell components. The invention is further exemplified by methods for exploitation of the unique characteristics of the oil body proteins and oil body genes for expression of polypeptides of interest in many organisms, particularly plant **seeds**. Said polypeptides include thioredoxin and/or thioredoxin reductase. The invention can also be modified to recover recombinant polypeptides fused to oil body proteins from non-plant host cells.

L6 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The invention concerns regenerative drugs, dietary supplements, feed additives that contain microorganisms and modulating substances, e.g. enzymes, GRAS (Generally Recognized As Safe) aromas, plant exts. Further the compns. contain vitamins, minerals, growth promoters, carrier substances, etc. Microorganisms are a-pathogenic, pathogenic or facultative pathogenic,.

L6 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The present invention relates to novel and improved methods of producing com. levels of **chymosin** in transgenic plants, by recombinant expression of **chymosin** in plant **seeds**, is described. An improved method for the laboratory-scale purification of **chymosin** from transgenic **seed** produced is described. Construction of a plant transformation vector comprising of a chimeric nucleic acid sequence containing prepro-**chymosin** is also described. Agrobacterium strain EHA101 (pSBS2151) was used to transform Brassica napus. The biol. activity of the plant (Brassica) derived **chymosin** was determined through the use of milk-clotting assays. Transgenic Brassica **seeds** had the ability to clot milk whereas, **seeds** that were not transformed with the prochymosin gene were unable to clot milk.

L6 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB Genes for oleosins and other proteins of the oil body of plants are cloned and methods of using peptides of the proteins to direct foreign proteins to the oil body are described. Incorporation of a protein into the oil body greatly simplifies its purification from the host organism. Proteins including, but not limited to: **seed** storage proteins, enzymes, bioactive peptides, and antibodies can be prepared and purified in this manner. The invention can also be modified to recover oil body protein fusion products from non-plant host cells. These oil body-associated proteins can be released during **seed** germination to afford protection of seedlings from pathogens. Finally, the persistent association of oil body proteins with the oil body can be further utilized to develop a biol. means to create novel immobilized enzymes useful for bioconversion of substrates. Use of the oleosin gene and promoter to direct synthesis of a β-glucuronidase fusion protein with incorporation of the fusion protein into the oil body is demonstrated. The enzyme could be released from the oil body by cleavage with thrombin.

L6 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB Methods and compns. for expressing a heterologous peptide/polypeptide of interest in a **seed** cell as a fusion protein with an oil body protein (oleosin) are described. The fusion protein may be isolated by methods such as affinity chromatog. using antibodies to the oil body protein. The Arabidopsis thaliana 1.8 kb oleosin gene was cloned and sequenced. An expression cassette encoding interleukin-1β fused to this oleosin was prepared Transgenic tobacco and Brassica napus plants containing this expression cassette were shown by immunochem. anal. of electrophoretically separated tobacco proteins to contain the expected fusion protein. Also disclosed were the preparation of various recombinant proteins of non-plant origin by expression of their oleosin/protein-encoding chimeric gene in transgenic B. napus. Insecticidal protein may also be expressed using this method in transgenic plants for protection. Finally, the persistent association of oil body proteins with the oil body can be further utilized to develop a biol. means to create novel immobilized enzymes useful for bioconversion of substrates. Cloning of cDNA for oleosin from B. napus was also shown.

L6 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AB An aspartic proteinase in rice **seeds** (oryzasin) was purified by (NH3)2SO4 fractionation, DEAE-cellulose anion exchange chromatog., Sephadex G-100 gel filtration, Mono Q anion exchange chromatog., and pepstatin-affinity chromatog. SDS-PAGE showed the affinity-purified enzyme to have two mol. forms, 57 and 53 kDa, together with their probable autolyzates appearing as two small bands at 35 and 25 kDa. Compared with the other three bands, the 57 kDa band reacted strongly on western blot anal. The affinity-purified oryzasin pH optimum for hydrolysis is 3.0 and is completely inhibited by pepstatin but not affected by other proteinase inhibitors such as EDTA, leupeptin, PMSF, and E-64. The milk-clotting activity of oryzasin was investigated using the crude enzyme obtained by precipitation at 30% and 60% (NH4)2SO4 saturation The enzyme clotted a skim milk solution
at pH 6.3, yielding the same κ-casein digest pattern as those of **chymosin** and pepsin producing a 12 kDa band.

L6 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB The present invention relates to the use of a class of genes called oil body protein genes that have unique features. The discovery of these features allowed the invention of methods for the production of recombinant proteins wherein a protein of interest can be easily separated from other host cell components. The invention is further exemplified by methods for exploitation of the unique characteristics of the oil body proteins and oil body genes for expression of polypeptides of interest in many organisms, particularly plant **seeds**. Said polypeptides may include but are not limited to: **seed** storage proteins, enzymes, bioactive peptides, antibodies and the like. The invention can also be modified to recover recombinant polypeptides fused to oleosins from non-plant host cells. Addnl. the invention provides a method of using recombinant proteins associated with **seed** oil bodies released during **seed** germination for expression of polypeptides that afford protection to seedlings from pathogens. Finally, the persistent association of oil body proteins with the oil body can be further utilized to develop a biol. means to create novel immobilized enzymes useful for bioconversion of substrates.

L6 ANSWER 11 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

L6 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AB The gene organization and nucleotide sequence of an aspartic proteinase (AP) of plant origin were first disclosed by cDNA and genomic DNA cloning of a rice AP (oryzasin). The deduced amino acid sequence of oryzasin 1 (I) was similar to those of other APs (34-85%), with highest similarity (85%) to barley AP (HvAP). I, as well as HvAP, is distinct from animal and microbial APs in that the plant APs contain a unique 104-amino-acid insertion in the C-terminal region. The I gene spans approx. 6.6 kbp and is composed of 14 exons and 13 introns. The exon-intron organization of the I gene is totally different from those of genes for animal and microbial APs such as human cathepsin D, rat renin, bovine **chymosin**, aspergillopepsin A of Aspergillus awamori, proteinase A of Saccharomyces cerevisiae and rhizopuspepsin of Rhizopus niveus, despite the fact that I shows overall sequence similarity to these APs.

L6 ANSWER 13 OF 22 CABA COPYRIGHT 2004 CABI on STN
AB **Seeds**, flowers and leaves of Onopordum turcicum contained proteolytic enzymes that could coagulate milk. Extraction, concentration and identification of the parameters affecting the activity of the enzyme complex were followed by partial purification steps involving gel-filtration and ion-exchange chromatography. Milk clotting activity of the enzyme complex was tested in several steps of its purification and an increase of almost 200-fold was obtained. MW of the proteolytic enzyme fraction with the maximum activity was about 19 000-24 000. Isoelectric point was 3.3-3.7.

L6 ANSWER 14 OF 22 CABA COPYRIGHT 2004 CABI on STN
AB An inhibitor of aspartic proteinases from wheat bran was characterized: it had a molecular mass of 58 kDa and high resistance to heat (100[deg]C) and pH (0.8-12). This protein differs in its effectiveness of inhibition against various aspartic proteinases: it is more active on pepsin than on endogenous wheat enzyme and inactive against cathepsin D, **chymosin** or proteinases of other classes. The wheat inhibitor thus appears to be considerably different from those isolated from potato: no protein inhibitor of similar properties has previously been described.

L6 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AB Suspension-cultured cells of carrot (Daucus carota) synthesize and secrete a glycoprotein that is normally found only in dermal tissues (epidermis, endodermis and periderm). This protein, previously called GP57, is now referred to as EDGP (Extracellular Dermal GlycoProtein). Sufficient quantities of EDGP were purified to obtain amino-acid sequences on 2 internal tryptic peptides and a cDNA library of young carrot roots was screened with antiserum to EDGP and with oligonucleotides corresponding to the peptides. Here the authors report the derived amino-acid sequence of EDGP. Sequence comparisons show that it has 40% amino-acid sequence identity with 7S basic globulin, a protein that is released when soybean **seeds** are soaked in hot water for a few hours. It is suggested that these 2 proteins belong to a new family of dermal proteins. This is apparently the first report of a derived amino-acid sequence for a protein that is specific to the epidermis and other dermal tissues. The level of EDGP mRNA is low in dry **seeds**, but increases rapidly in growing seedlings as they develop dermal tissues. The level of mRNA is low in storage roots, but increases rapidly in response to wounding. The presence of EDGP in dermal tissues and its up-regulation in response to wounding indicate a role in the response of plants to biotic and/or abiotic stresses. An unusual feature of the amino-acid sequence of EDGP is that it contains a short motif, which is present at the active site of aspartyl proteases such as pepsin and **chymosin**.

L6 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB **Seed** from transgenic plants in which a gene for an enzyme is

strongly expressed are used as a source of the enzyme for industrial or therapeutic purposes. **Seed** may be ground to conveniently prepare the crude enzyme. The phytase gene of Aspergillus ficuum was cloned using polymerase chain reaction and put under the control of a constitutive (cauliflower mosaic virus 35S) or **seed**-specific (cruciferin or Brassica napus 12S storage protein) promoter. The gene was introduced into tobacco via Agrobacterium. Regenerated lines producing phytase at up to 0.4% of soluble **seed** protein were selected. Ground **seed** from these plants was able to hydrolyze phytic acid in buffer, soybean meal, and in an in vitro model of the chicken digestive tract. Broiler chicks fed on a cereal meal-based diet supplemented with tobacco **seed** flour at 400 phytase units/kg showed growth comparable to that of chicks grown on a diet enriched in Ca and P. Similar expts. involving expression of the Bacillus licheniformis α-amylase gene in tobacco for use in starch liquefaction are described.

L6 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
AB Gouda type cheese was prepared with a milk-clotting enzyme partially purified from the young **seeds** of A. julibrissin. The yield of green cheese made with the enzyme was comparable to that made with **chymosin**. In terms of flavor, the enzyme did not develop any bitterness in the cheese after 3 mo of ripening. Hence, the milk-clotting enzyme was purified .apprx.20-fold, and its properties were examined The purified enzyme showed a single band in SDS-PAGE. The mol. wts. estimated by gel filtration and SDS-PAGE were 21,000 and 28,000, resp. The optimum pH for proteolytic activity of the enzyme was at .apprx.6.0, whereas the optimum temperature was at 65°. The enzyme was most stable at pH .apprx.6.0. Proteolytic activity was lost at temps. of >50°. and .apprx.50% of the original activity was lost after incubation at 60° for 30 min. On the other hand, proteolytic activity was inhibited by p-chloromercuribenzoate, N-ethylmaleimide, antipain, and leupeptin, and was activated by dithiothreitol and L-cysteine. This indicated that the purified enzyme was a papain-like cysteine protease.

L6 ANSWER 18 OF 22 CABA COPYRIGHT 2004 CABI on STN DUPLICATE 6
AB Some 63 out of 165 species of trees were found to possess milk clotting ability. Leaf extracts of some trees hydrolysed [kappa]-casein more rapidly than [alpha]s1-casein and [beta]-casein, while those of the other trees digested [alpha]s1-casein and/or [beta]-casein as well as [kappa]-casein. Leaf extracts of Albizia julibrissin, Euonymus sieboldianus and Celastrus orbiculatus digested casein components, resulting in some large peptide fragments, and the fragments hardly disappeared despite long incubation. The ratios of milk clotting activity:proteolytic activity of the extracts of Albizia julibrissin, Euonymus sieboldianus and Celastrus orbiculatus, and **chymosin** were 26.9, 21.6, 23.3 and 34.2 resp. Conversely, milk clotting activity was observed not only in leaves but also in the bark and young **seeds** of Albizia julibrissin.

L6 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
AB Computer anal. of the cDNA sequence of barley aspartic proteinase predicted a hydrophobic signal sequence (presequence) of about 20 amino acids to be cleaved from the 508 residue polypeptide, but the exact location of the cleavage site remains to be determined The N-termini of both the 32 kDa and 29 kDa subunits start from the serine residue at position 67. This gives a putative prosequence of about 45 amino acids, which is equal in length to the prosequences of other aspartic proteinases such as porcine cathepsin D and **chymosin**. The potential active sites are located at Asp101-Thr102-Gly103 and Asp238-Ser289-Gly290, similar to the other aspartic proteinases. Earlier protein analyses suggested that the larger (32 + 16 kDa) enzyme is an intermediate precursor of the smaller (29 + 11 kDa) enzyme. The presence of the N-termini of all

subunits (32, 29, 16 and 11 kDa) in the same transcript as well as the presence of a single 2.0 kb mRNA in the Northern blots confirms this hypothesis. In addition, during the processing, a disulfide bridge in the cleaved polypeptide is removed and the 29 kDa and 11 kDa subunits remain held together by noncovalent bonds. In comparison with the mammalian aspartic proteinases the barley enzyme has an extra 104 amino acids inserted approx. 317 amino acids from the initiation methionine, and containing the N-terminal sequence of the 16 kDa subunit. The N-terminus of the 11 kDa subunit is located immediately after the insert. The insert is located at approx. the same position as intron 7 in the human renin gene, the human prochymosin pseudogene and the human pepsinogen A and C genes. Interestingly, the 104 amino acid insert has certain homol. with the CaMV genome. However, the origin of the 104 amino acid insert as well as its evolutionary significance remains to be elucidated. According to the amino acid sequence data barley aspartic proteinase is homologous to porcine cathepsin D, human cathepsin D and yeast proteinase A. The homol. is split between two regions of the barley enzyme, leaving 104 nonhomologous amino acids in between. In the N-terminal region there is a 52% identity over 248 amino acids between the porcine cathepsin D and the barley enzyme.

L6 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

AB Biol. pesticides are prepared using transgenic plants containing genes coding for proteinase inhibitors or their precursors. Ti plasmid-derived vector pCIB710 was constructed, the egg albumin cystatin gene and the cauliflower mosaic virus promoter/terminator cassette were inserted, and maize protoplasts were transformed with this vector using electroporation and were regenerated. Plants containing the vector and pos. for cystatin expression were resistant to infestation with Diabrotica larvae compared to control plants.

L6 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

AB A dry active product is obtained by mixing dry com. papain with dry yeast, or with **seeds** containing amygdalin and emulsin such as cacao **seeds**, or with a mixture of dry yeast and above mentioned **seeds**. The product is used as substitute for pepsin, trypsin, erepsin, lipase, **chymosin** and pancreas extract, as albumin and fat solvent and in various other applications. In an example com. dry papain 50 is mixed with dry yeast 30 and cacao **seeds** 200 parts.

L6 ANSWER 22 OF 22 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AB Seventeen colonies of honey bees from 13 different sources were dosed with Nosema apis spores in sugar syrup. Spore loads carried by foraging bees were recorded for 11 weeks thereafter. Eleven further colonies, fed plain sugar syrup, were sampled as controls. Mean spore loads in all N. apis-dosed colonies increased to between 8 million and 27 million spores per bee two weeks after dosing, spore loads had decreased to levels comparable to those found in the control colonies (about 4 million spores per bee or less). There were no significant differences in the responses of colonies from different sources. Colonies from different sources showed a similar uniformity with regard to the rate of spread of infection among caged bees and **chymosin** levels in the guts of workers. These results show little variation in response to N. apis infection, and indicate a lack of genetic variability among New Zealand bees in respect of susceptibility to N. apis infection.

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L5 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Genetic constructs, transformation vectors and methods are taught for production of transgenic plants which can be selectively removed from a growing site by application of a chemical agent or physiol. stress. The invention links a target gene for the trait of com. interest to a conditionally lethal gene, which can be selectively expressed to cause plant death. By use of the genetic constructs, transformation vectors and methods of the present invention, invasion of environments and contamination of com. non-engineered productions by transgenic plants can be avoided. Methods are also taught for transformation of Brassica species.

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB A Local isolate of Hyphomucor assamensis showed high activity of rennet production when cultivated on medium containing wheat bran on solid culture. Highest enzyme activity was recorded using 1% five days old culture at 25°. A 55% moisture content using dry wheat bran yielded the highest milk clotting activity at pH 7. Fructose favored the enzyme production, 1% of skim milk, 1.66 gm/l Mg SO4. 7H2O and 6.66 gm/l KH2PO4. The crude rennet enzyme reached its maximum activity when 1.08 mg protein/reaction mixture, 8% skim milk powder and 0.11 gm/100 mL CaCl2were used at pH 5 using 0.03 M sodium acetate buffer.

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Food additives are encapsulated in a denatured protein coating. The food additives are mixed with a solution or slurry of the protein and heated to denature protein; the coagulant is then comminuted to microcapsules. Alternatively, the protein may be insolubilized by proteolysis and Ca stearate may be added to improve flexibility of the coagulant. Polysaccharides may also be used to generate a partially water-soluble coating. Optimization expts. are reported.

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Food additives (including food dyes) used in Japan were tested for their toxicities in rats and mice. Gardenia yellow induced liver injury. Anise oil, pimenta oil, orange oil, and wood vinegar induced death. Nontoxic additives included caramel, crystalline cellulose, tamarind **seed** polysaccharide, locust bean gum, allspice oil, vanilla, α-amylase, β-amylase, lysozyme, **rennin**, gardenia red, and gardenia green.

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AB Exts. of mature green, dry, and germinated V. faba depressed the trypsin activity with casein. Germination of V. faba (for 60 h) lowered the trypsin inhibitor (I) activity. Saline (0.171M) was the most efficient extractant for I. Min. amts. of the I were extracted in the pH range 4-5. I of V. faba was nondialyzable. The inhibitor activity originated in the **seeds** at the beginning of pod formation and increased with development to maturity. I was active only towards trypsin, it was inactive towards papain, **rennin**, and pepsin. Chromatographing V. faba proteins possessing antitryptic activity on a column of DEAE-cellulose yielded 6 peaks, all of which possessed antitryptic activity.

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Normally prepared dahi, an important fermented milk product in West Pakistan, was compared with the product made by the use of a **rennin**-like enzyme prepared from the **seeds** of Withania coagulans. The enzyme-like material was extracted with water from finely ground **seeds**, followed by precipitation with alc. The product freed from alc. by evaporation actively coagulated milk; 200 mg. coagulated 1 l. milk

in 45 min. at 45°. Boiled milk, thus treated was compared chemical and nutritionally with conventionally prepared dahi, as follows: moisture 88.91, 88.31; protein 3.69, 3.84; fat 3.23, 3.33; lactose 3.43, 3.84; titratable acidity 0.63, 0.13% (as lactic), resp. The digestibility and protein efficiency were nearly the same for both.

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB cf. C. A. 29, 1110.1,1110.5. The effectiveness of the amylase contained in various cereal grains can be increased by proteases (trypsin, pepsin, papain, **rennin**) to different degrees. The increase in the amylase activity depends partly upon the nature of the protein and the extent of its hydrolysis. Trypsin produces the strongest effect. However, the increase in amylase effectiveness is greater in **seeds** of high amylase content (wheat, rye, barley) than of a low content so that the protease action is due primarily to formation or liberation of amylase-mobilizing factors, the eleuto-substances, kinases, etc., rather than the destruction of the proteins. The effect is manifested principally in the saccharifying ability of the amylase.

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB The mucin from Cydonia **seeds** is precipitated by papain. Other "slimes," e. g., from linseed, gum arabic and tragacanth, are not precipitated The action is sp. for Cydonia, which may thus be identified. Other enzymes, pepsin, **rennin**, trypsin, and certain plant proteases, do not precipitate Cydonia mucin. The precipitation is based on the neutralization of the negative charge of the mucin by the positive charge of papain. The combination is quite stable; papain exhibits fermentative action (milk coagulation) while in this combination. Blood serum prevents the coagulation; the serum globulin is the effective preventive agent. Alkalies and inorg. acids inhibit the coagulation; organic acids and neutral salts promote the coagulation.

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB The conversion of caseinogen into casein in by enzyme action is accompanied by the cleavage of N, P, and Ca. **Rennin** produces no sol.N or P. Trypsin splits off both soluble N and P, while the Withania enzyme (obtained from the **seeds** of the Withania coagulans) also produces soluble N and P, but in smaller absolute quantities. The cleavage products are specific for each enzyme and it is to this difference of enzyme action that the variation in behavior of the resulting casein is to be ascribed. The precipitation of Ca caseinate by soluble Ca salts is not due to any chemical combination with these. The caseinogen once exposed to enzyme action and redispersed cannot be rendered more precipitable by renewed enzyme action. If the enzyme be sufficiently concentrated, ppts. are obtained without the addition of Ca salts and the same thing occurs with more dilute enzyme solns. when the temperature is raised above 45°.

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AB Alfalfa **seeds** contain enzymes that hydrolyze starch and amygdalin, like amylase and emulsin, resp.; an enzyme that coagulates milk, like **rennin**; an enzyme that ppts. purpurogallin from pyrogallol solution with H2O2, like the ordinary peroxidases; and an enzyme that digests casein and Witte peptone, like a protease. The protease is a vegetable erepsin. The **seeds** probably do not contain invertase, and if lipase is present, it is not water-soluble

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